

REMARKS/ARGUMENTS

Claims 1-40 are pending in the application. The Examiner has rejected Claims 1-40. Applicant respectfully requests reconsideration of pending claims 1-40.

The Examiner has rejected the drawings under 37 CFR § 1.83(a). The Examiner states the limitations of claim 17-19 must be shown or the feature(s) canceled from the claim(s). Applicant has amended Figures 1, 7a, 7b, and 7c. Applicant submits no new matter has been added. Applicant submits the specification and claims, as filed provide support for the amendments. For example, Applicant notes the amendment to Figure 1 is described in page 4, lines 4-6, of the specification, as originally filed. As another example, Applicant notes the amendment to Figure 7a is described in page 18, lines 8-11, of the specification, as originally filed. As another example, Applicant notes the amendment to Figure 7b is described in page 18, lines 25 and 26, of the specification, as originally filed. As yet another example, Applicant notes the amendment to Figure 7c is described in page 19, lines 4-6, of the specification, as originally filed. Moreover, Applicant submits the drawings, as amended, were prepared for the original filing of the application but an apparent software/printing problem unintentionally altered the originally filed drawings. Thus, Applicant submits the Examiner's rejection of the drawings has been obviated.

The Examiner has rejected claims 7, 8, and 16 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicant addresses such claims individually below.

Regarding claim 7, Applicant has amended claim 7. Applicant submits no new matter has been added. Applicant submits the amendment of claim 7 involves only informalities that are merely cosmetic and do not affect the intended scope of claim 7. Applicant submits claim 7 is in condition for allowance.

Regarding claim 8, Applicant has amended claim 8. Applicant submits no new matter has been added. Applicant submits the amendment of claim 8 does not limit the scope of claim 8. Applicant submits claim 8 is in condition for allowance.

Regarding claim 16, the Examiner states “‘unnumbered interface’ is indefinite for failing to particularly point out and distinctly claim.” Applicant respectfully disagrees. Applicant notes the

following examples in the specification where “unnumbered interface” is described: Page 10, lines 1 and 2, “...interfaces that do not have individual IP addresses (‘unnumbered interfaces’)” and page 14, lines 7 and 8, “Interface 560 has been assigned local port number 2, but has not been assigned an IP number. It is therefore referred to as an ‘unnumbered interface’.” Thus, Applicant submits claim 16 is in condition for allowance.

The Examiner has rejected claims 1-40 under 35 U.S.C. § 102(e) as being anticipated by Robinson et al. (U.S. Patent No. 6570867 B1).

Regarding claims 1, 8, 16, 32, and 33, Applicant respectfully disagrees. For example, Applicant submits the cited portion of the cited reference fails to disclose “selecting a first managed network device having a first network interface, said first network device being managed by a network management system” as recited in claims 1 and 32. Regarding such feature, the Examiner cites Fig. 10 of Robinson et al. However, Applicant can find no teaching of such feature in Fig. 10 or in the description of Fig. 10 from col. 13, line 59, to col. 14, line 45.

As another example, Applicant submits the cited portion of the cited reference fails to disclose “determining a local interface address and a next neighbor address associated with said first network interface” as recited in claims 1 and 32. Regarding such feature, the Examiner cites “(Fig. 6, user supply SRC and DEST).” However, Applicant can find no teaching of such feature in Fig. 6 or in the description of Fig. 6 from col. 10, line 48, to col. 11, line 14. Rather, col. 10, lines 53-56, state “From this flowchart, it can be observed that the tracing operation of a particular route is triggered by the user which specifies the source and destination endpoints of the route.” Applicant sees no mention in that portion of “local interface address,” nor “next neighbor address,” nor “associated with said first network interface,” or even “first network interface.”

As a further example, Applicant submits the cited portion of the cited reference fails to disclose “comparing said local interface address and next neighbor address with endpoint address information associated with a plurality of logical links stored in a logical link database associated with said network management system” as recited in claims 1 and 32. Regarding such feature, the Examiner cites “(block 60 in Fig. 5).” However, Applicant can find no teaching of such feature in block 60 in Fig. 5. Rather, col. 8, line 66, through col. 9, line 4, states, “Once captured from the database 25, the DB manager 46 places the source and destination objects into the queuing manager 60 which is responsible for queuing and processing route tracing requests according to a high priority, a real-time priority, a

historical high priority or a historical low priority.” Also, col. 10, lines 21-29, states, “In order to service the user's historical route trace request, the queuing manager 60 periodically requests that the DB manager 46 provides it with a list of all source and destination object pairs stored in the route list of the database 25 and places them in its low priority queue. The queuing manager 60 will then sequentially send, in accordance with its defined priority levels, the low priority object pairs queued to the source and destination register 56 for processing and subsequent forwarding to the path assembler 57.” Applicant sees no mention in those portions of the relevant feature recited in claims 1 and 32.

As yet another example, Applicant submits the cited portion of the cited reference fails to disclose “creating a first logical link between said local interface address and said next neighbor address,” as recited in claim 1. Regarding such feature, the Examiner cites “(block 58 in Fig. 5).” However, Applicant can find no teaching of such feature in block 58 in Fig. 5.

As a further example, Applicant submits the cited portion of the cited reference fails to disclose “storing said first logical link in said logical link database” as recited in claim 1. Regarding such feature, the Examiner cites “(col. 9, lines 47-50).” However, Applicant can find no teaching of such feature in col. 9, lines 47-50. Rather col. 9, lines 47-50, states, “If the rediscovered paths differ from the existing paths in any way (by a single network device or a single interface), this causes the paths to be updated or new paths to be associated with the specified route.” Applicant sees no mention in that portion of “storing the first logical link in the logical link database.”

As yet another example, Applicant submits the cited portion of the cited reference fails to disclose “displaying a graphical representation of said first logical link on a display device” as recited in claim 1. Regarding such feature, the Examiner cites “(col. 9, lines 44-46).” However, Applicant can find no teaching of such feature in col. 9, lines 44-46. Rather col. 9, lines 44-46, states, “In particular, the paths are rediscovered and checked against the existing paths at the polling rate specified by the user in the GUI 23.” Applicant sees no mention in that portion of “displaying a graphical representation of said first logical link on a display device.”

As to claim 8, the Examiner alleges the cited reference anticipates claim 8, but Applicant can find no citation by the Examiner of any portion of the cited reference or any other evidence in support of such allegation. Specifically, Applicant can find no citation of a portion of the cited reference as allegedly teaching “wherein said logical link database identifies said first endpoint address information

as being associated with a network device being managed by a network management system and said second endpoint address information as being associated with a network address” as recited in claim 8.

As to claim 16, the Examiner alleges the cited reference anticipates claim 16, but Applicant can find no citation by the Examiner of any portion of the cited reference or any other evidence in support of such allegation. Specifically, Applicant can find no citation of a portion of the cited reference as allegedly teaching “wherein said logical link comprises a logical link between unnumbered interfaces” as recited in claim 16.

As to claim 32, the Examiner alleges the cited reference anticipates claim 32, but Applicant can find no citation by the Examiner of any portion of the cited reference or any other evidence in support of such allegation with respect to “determining that said local interface address and next neighbor address are both associated with endpoint address information for a first logical link stored in said logical link database” as recited in claim 32.

As to claim 33, the Examiner alleges the cited reference anticipates claim 33, but Applicant can find no citation by the Examiner of any portion of the cited reference or any other evidence in support of such allegation. Specifically, Applicant can find no citation of a portion of the cited reference as allegedly teaching “verifying that said first logical link comprises a logical link between said first network interface and said next neighbor address” as recited in claim 33.

For the foregoing reasons, Applicant submits the Examiner has not established a *prima facie* finding of any of claims 1, 8, 16, 32, and 33 being anticipated by the Robinson et al. reference. Accordingly, Applicant submits claims 1, 8, 16, 32, and 33 are in condition for allowance.

Regarding claims 3 and 34, Applicant respectfully disagrees. For example, Applicant submits the cited portion of the cited reference fails to disclose “determining that said next neighbor address is associated with a second managed network device” as recited in claim 3. Regarding such feature, the Examiner cites “(col. 5, lines 1-30)” of Robinson et al. However, Applicant can find no teaching of such feature in col. 5, lines 1-30. Also, Applicant submits the cited portion of the cited reference fails to disclose “identifying said first logical link as a logical link between managed network devices” as recited in claim 3. Regarding such feature, the Examiner merely cites “(e.g. link between the networks).” Applicant does not find the feature disclosed within col. 5, lines 1-30. Moreover, Applicant can find no allegation nor any citation or other evidence to support such allegation that the cited reference discloses “obtaining a local interface address and a next neighbor address for a second

network interface of said second managed network device” as recited in claim 34 or “comparing said local interface address and next neighbor address of said second network interface to said local interface address and said next neighbor address of said first network interface” as recited in claim 34. Thus, Applicant submits claims 3 and 34 are in condition for allowance.

Regarding claim 4, Applicant respectfully disagrees. For example, Applicant submits the cited portion of the cited reference fails to disclose “determining that said next neighbor address is not associated with a managed network device” as recited in claim 4. The Examiner cites “(e.g. real-time routing request)” as allegedly disclosing such feature. Applicant submits the “real-time routing request” of the Robinson et al. reference fails to anticipate the above feature. As another example, Applicant submits the cited portion of the cited reference fails to disclose “identifying said first logical link as a logical link between a managed network device and a network address” as recited in claim 4. Regarding such feature, the Examiner cites “(e.g. rediscovered path)” of Robinson et al. However, Applicant submits the “rediscovered path” of Robinson et al. fails to anticipate the above feature. Thus, Applicant submits claim 4 is in condition for allowance.

Regarding claim 5, Applicant respectfully disagrees. For example, Applicant submits the cited portion of the cited reference fails to disclose “wherein said next neighbor address comprises a subnet address and further comprising the step of identifying said first logical link as a logical link between a managed network device and a subnet” as recited in claim 5. The Examiner cites “(e.g. the address of node 11 in Fig. 1)” as allegedly disclosing such feature. Applicant can find no disclosure of the above feature with respect to “node 11 in Fig. 1” of the Robinson et al. reference. Thus, Applicant submits claim 5 is in condition for allowance.

Regarding claim 7, Applicant respectfully disagrees. For example, Applicant submits the cited portion of the cited reference fails to disclose “wherein said second logical link comprises first and second endpoint address information, said first endpoint address information comprising said next neighbor address and said second endpoint address information comprising said local interface address” as recited in claim 7. The Examiner cites “(e.g. the source address and destination address)” as allegedly disclosing such feature. Applicant can find no disclosure of the above feature with respect to “the source address and destination address” of the Robinson et al. reference. Thus, Applicant submits claim 7 is in condition for allowance.

Regarding claims 9-11, Applicant respectfully disagrees. For example, Applicant submits the cited portion of the cited reference fails to disclose “determining that said local interface address is not associated with any logical link in said logical link database prior to creating said first logical link” as recited in claim 9. Regarding such feature, the Examiner cites “(e.g. the real-time trace routing)” of Robinson et al. However, Applicant can find no teaching of such feature with respect to “the real-time trace routing” of the Robinson et al. reference. Moreover, Applicant can find no allegation nor any citation or other evidence to support such allegation that the cited reference discloses “determining that said next neighbor address is not associated with any logical link in said logical link database prior to creating said first logical link” as recited in claim 10 or “determining that said next neighbor address and said local interface address are not both associated with any logical link in said logical link database prior to creating said first logical link” as recited in claim 11. Thus, Applicant submits claims 9-11 are in condition for allowance.

Regarding claims 12 and 15, Applicant respectfully disagrees. For example, Applicant submits the cited portion of the cited reference fails to disclose “wherein said local interface address comprises a network address assigned to a port of said first managed network device” as recited in claim 12. Regarding such feature, the Examiner cites “(e.g. edge node in Fig. 1)” of Robinson et al. However, Applicant can find no teaching of such feature with respect to “edge node in Fig. 1” of the Robinson et al. reference. Moreover, Applicant can find no allegation nor any citation or other evidence to support such allegation that the cited reference discloses “wherein said local interface address comprises a network address assigned to said first managed network device and a port number of said first managed network device” as recited in claim 15. Thus, Applicant submits claims 12 and 15 are in condition for allowance.

Regarding claims 13 and 14, Applicant respectfully disagrees. For example, Applicant submits the cited portion of the cited reference fails to disclose “wherein said next neighbor address comprises a network address assigned to a port of said second managed network device” as recited in claim 13. Regarding such feature, the Examiner cites “(e.g. edge node of other networks, col. 4, lines 41-44)” of Robinson et al. However, Applicant can find no teaching of such feature with respect to “edge node of other networks” in col. 4, lines 41-44 of the Robinson et al. reference. Thus, Applicant submits claims 13 and 14 are in condition for allowance.

Regarding claims 17-19, Applicant respectfully disagrees. For example, Applicant submits the cited portion of the cited reference fails to disclose “wherein said step of displaying said graphical

representation of said first logical link comprises displaying a representation of an arrow from said first managed network device to said second managed network device” as recited in claim 17. Regarding such feature, the Examiner cites “(e.g. Fig. 3)” of Robinson et al. However, Applicant can find no teaching of such feature with respect to “Fig. 3” of the Robinson et al. reference. Moreover, Applicant can find no allegation nor any citation or other evidence to support such allegation that the cited reference discloses “wherein said step of displaying said graphical representation of said first logical link comprises displaying a representation of an arrow from said first managed network device to a representation of said next neighbor address “ as recited in claim 18 or “wherein said step of displaying said graphical representation of said first logical link comprises displaying a representation of an arrow from said first managed network device to a representation of a subnet” as recited in claim 19. Thus, Applicant submits claims 17-19 are in condition for allowance.

Regarding claims 20-23, Applicant respectfully disagrees. For example, Applicant submits the cited portion of the cited reference fails to disclose “wherein said local interface address comprises a port number of said first network interface and a first IP address of said first managed network device” as recited in claim 20. Regarding such feature, the Examiner cites “(e.g. the source of IP address)” of Robinson et al. However, Applicant can find no teaching of such feature with respect to “the source of IP address” of the Robinson et al. reference. Moreover, Applicant can find no allegation nor any citation or other evidence to support such allegation that the cited reference discloses “wherein said next neighbor address comprises a second IP address” as recited in claim 21, “wherein said second IP address comprises an IP address of a third managed network device” as recited in claim 22, or “wherein said second IP address comprises an IP address assigned to a second network interface of said third managed network device” as recited in claim 23. Thus, Applicant submits claims 20-23 are in condition for allowance.

Regarding claims 24 and 25, Applicant respectfully disagrees. For example, Applicant submits the cited portion of the cited reference fails to disclose “wherein said step of determining said local interface number and said next neighbor address for said first network interface comprises sending a first message from said network management system to said first managed network device and receiving a second message from said first managed network device in response to said first message” as recited in claim 24. Regarding such feature, the Examiner cites “(e.g. the communication between edge nodes in Fig. 1)” of Robinson et al. However, Applicant can find no teaching of such feature with respect to “the communication between edge nodes in Fig. 1” of the Robinson et al. reference.

Moreover, Applicant can find no allegation nor any citation or other evidence to support such allegation that the cited reference discloses “wherein said step of determining said local interface number and said next neighbor address for said first network interface comprises receiving a first message from said first managed network device initiated by said first managed network device upon said first network interface being configured” as recited in claim 25. Thus, Applicant submits claims 24 and 25 are in condition for allowance.

Regarding claims 26-28, 30, and 39, Applicant respectfully disagrees. For example, Applicant submits the cited portion of the cited reference fails to disclose “wherein said first and second messages comprise messages using the SNMP protocol” as recited in claim 26. Regarding such feature, the Examiner cites “(col. 18, lines 23-24; col. 3, lines 2-4)” of Robinson et al. Rather, col. 3, lines 2-4, merely states, “In a preferred embodiment, the RPM system is incorporated in an Internet protocol (IP) network and is designed to be operable in a simple network management protocol (SNMP) environment.” Moreover, Applicant can find no allegation nor any citation or other evidence to support such allegation that the cited reference discloses “wherein said first logical link is identified in said logical link database as a logical link utilizing said first communications protocol” as recited in claim 28, “determining a second communications protocol used by said first network interface” as recited in claim 30, or “wherein said network communications system comprises means for sending and receiving messages utilizing the SNMP protocol” as recited in claim 39. Thus, Applicant submits claims 26-28, 30, and 39 are in condition for allowance.

Regarding claims 29 and 31, Applicant respectfully disagrees. For example, Applicant submits the cited portion of the cited reference fails to disclose “wherein said first logical link is identified in said logical link database as a logical link utilizing said first communications protocol” as recited in claim 29. Regarding such feature, the Examiner cites “(e.g. links communicate in Fig. 1)” of Robinson et al. However, Applicant can find no teaching of such feature with respect to “links communicate in Fig. 1” of the Robinson et al. reference. Moreover, Applicant can find no allegation nor any citation or other evidence to support such allegation that the cited reference discloses “wherein said first logical link is identified in said logical link database as a logical link utilizing said first and second communications protocols” as recited in claim 31. Thus, Applicant submits claims 29 and 31 are in condition for allowance.

Regarding claims 35 and 37, Applicant respectfully disagrees. For example, Applicant submits the cited portion of the cited reference fails to disclose “a database of managed network devices” as recited

in claim 35. While the Examiner cites “(25 in Fig. 11)” as allegedly disclosing such feature, Applicant can find no such teaching. As another example, Applicant submits the cited portion of the cited reference fails to disclose “a database of logical links associated with said managed network devices” as recited in claim 35. While the Examiner cites “(46 in Fig. 10)” as allegedly disclosing such feature, Applicant can find no such teaching. As a further example, Applicant submits the cited portion of the cited reference fails to disclose “a network communications system for sending messages to managed network devices and receiving messages from said managed network devices” as recited in claim 35. While the Examiner cites “(58 in Fig. 5)” as allegedly disclosing such feature, Applicant can find no such teaching. As yet another example, Applicant submits the cited portion of the cited reference fails to disclose “a message analysis system for determining local interface address information and next neighbor address information from messages received from said managed network devices” as recited in claim 35. Regarding such feature, the Examiner cites “(57 in Fig. 5)” of Robinson et al. However, Applicant can find no teaching of such feature with respect to “57 in Fig. 5” of the Robinson et al. reference. Moreover, Applicant can find no allegation nor any citation or other evidence to support such allegation that the cited reference discloses “a logical link creation system for creating logical links for storage in said logical links database” as recited in claim 37. Thus, Applicant submits claims 35 and 37 are in condition for allowance.

Regarding claim 36, Applicant respectfully disagrees. For example, Applicant submits the cited portion of the cited reference fails to disclose “a logical link display for displaying said logical links” as recited in claim 36. Regarding such feature, the Examiner cites “(col. 9, lines 44-46).” However, Applicant can find no teaching of such feature in col. 9, lines 44-46. Rather col. 9, lines 44-46, states, “In particular, the paths are rediscovered and checked against the existing paths at the polling rate specified by the user in the GUI 23.” Applicant sees no mention in that portion of “a logical link display for displaying said logical links.” Thus, Applicant submits claim 36 is in condition for allowance.

Regarding claim 38, Applicant respectfully disagrees. For example, Applicant submits the cited portion of the cited reference fails to disclose “a logical link information comparison system for comparing local interface address information and next neighbor address information obtained from messages received by from said managed network devices with endpoint information for said logical

links stored in said logical links database” as recited in claim 38. Regarding such feature, the Examiner cites “(block 60 in Fig. 5).” However, Applicant can find no teaching of such feature in “block 60 in Fig. 5.” Thus, Applicant submits claim 38 is in condition for allowance.

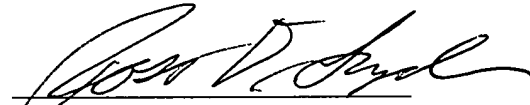
Regarding claim 40, Applicant respectfully disagrees. For example, Applicant submits the cited portion of the cited reference fails to disclose “a managed network device identification system for identifying managed network devices associated with said next neighbor address information received from said managed network devices” as recited in claim 40. Regarding such feature, the Examiner cites “(block 55, 56 in Fig. 5).” However, Applicant can find no teaching of such feature in “block 55, 56 in Fig. 5.” Thus, Applicant submits claim 40 is in condition for allowance.

In conclusion, Applicant has overcome all of the Office’s rejections, and early notice of allowance to this effect is earnestly solicited. If, for any reason, the Office is unable to allow the Application on the next Office Action, and believes a telephone interview would be helpful, the Examiner is respectfully requested to contact the undersigned attorney.

Respectfully submitted,

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